

Field work by G.D. March,
L.G. Robertson, 1981, 1982, and
R.G. Updike, 1981; photointerpre-
tation by G.D. March, 1982
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by
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EXPLANATION

Qod	Qof	$\frac{Qoa}{Qai}$	Qdo	Qd	Qef	$\frac{Qmb}{Qeb}$	$\frac{Qamy}{Qern}$	Qc	Qcf	Qet	$\frac{Qnf}{Ql}$	Qgi	Quaternary

MzPz

The sheets for the report were generated by the DGGS Geochemical Data Modeling System (GDMS). Surficial geologic units were reviewed (Heussel and Marcus, 1964; Krimmel, 1968; Lemke and Vehnle, 1972; Vehnle and Lemke, 1972; Miller, 1976), original field work and photointerpretation was digitized, and derivative maps were generated from the surficial-geology map. A matrix of attributes associated with each surficial-geologic unit (shown below) was derived from the surficial-geology map and units according to materials resources (sheet 2) or susceptibility to settling, shaking, liquefaction, sliding, or damage during earthquakes.

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MAP UNIT	DESCRIPTION OF MAP UNITS	MATERIALS	SUSCEPTIBILITY TO				
			SHAKING	SETTLEMENT	LIQUEFACTION	SLIDING	CHANGE
FLUVIAL DEPOSITS							
Qei	INACTIVE FLOOD-PLAIN ALLUVIUM - Moderately to well-sorted, angular to subangular silt deposited by modern rivers. Generally smooth surface. Low permeability, good drainage.	Silt	High	High	High	High	High
Qec	ACTIVE FLOOD-PLAIN ALLUVIUM - Moderately to well-sorted sand, pebbles, and clasts with minor silt deposited by modern rivers. Does not include deposits adjacent to the termini of modern glaciers (unit Qdo). Subrounded to well-rounded pebbles and cobbles. Generally smooth surface. Very high permeability, good drainage.	Gravel and sand	High	High	Medium	High	High
Qef	ALLUVIAL-FAN DEPOSITS - Poorly sorted, poorly stratified mixture of pebbles, cobbles, and boulders with minor silt and sand deposited by streams at valley mouths. Subrounded to rounded pebbles and cobbles angular to subangular boulders. Smooth surface. Very high permeability, good drainage.	Gravel and sand	Medium	Medium	Medium	Medium	Medium
Qmd	DELTA DEPOSITS - Moderately well sorted, subrounded, sandy silt and fine to gravelly sand with minor gravel deposited by rivers in intertidal and marine zones. Smooth surface. Very high permeability, poor drainage.	Mixed gravel, sand, and silt	High	High	High	High	High
GLACIAL DEPOSITS							
Qc	TILL - Poorly sorted silt, sand, and gravel with minor clay and cobbles deposited directly from glacial ice. May be locally reworked by meltwater streams. Generally unbedded except where reworked. Subangular to subrounded gravel clasts. Irregular to slightly irregular surface. Generally low to moderate permeability, very high permeability where deposit has been reworked, fair to good drainage.	Mixed gravel, sand, and silt	Medium	Medium	Low	Medium	Medium
Qdo	GLACIAL OUTWASH - Poorly to moderately well sorted mixture of sand, gravel, and clasts deposited by glacial meltwater. Subrounded gravel clasts. Generally smooth surface. Very high permeability, good drainage.	Gravel and sand	Medium	High	Medium	High	High
Qdf	GLACIAL-OUTWASH FAN DEPOSITS - Poorly sorted, stratified mixture of sand, pebbles, and cobbles deposited near the termini of glaciers. Generally subrounded to subangular clasts. Irregular surface. Very high permeability, good drainage.	Mixed gravel, sand, and silt	Medium	High	High	High	High
MARINE DEPOSITS							
Qmb	BEACH DEPOSITS - Loose, heterogeneous mixture of sand, pebbles, cobbles, and boulders that extends from mean lower low water to the upper limits of present wave action. Subrounded gravel clasts angular to subangular boulders. Smooth to irregular surface. Very high permeability, good drainage.	Gravel and sand	High	Medium	Medium	Medium	High
Qeb	EMERGENT BEACH DEPOSITS - Moderately well sorted, stratified deposits of elevated shore and delta sediments composed of subrounded sand and gravel. Elevated above sea level by isostatic uplift during regional deglaciation. Smooth to slightly irregular surface. High permeability, good drainage.	Gravel and sand	Medium	Medium	Low	Medium	Medium
Qem	OLDER EMERGENT MARINE DEPOSIT - Predominantly sediments deposited in floods by settling of fine-grained material derived from glacial rivers, and streams and later elevated by isostatic uplift during regional deglaciation. Primarily clay and silt with minor sand and generally subrounded gravel. Smooth surface. High permeability, good drainage.	Silt	Medium	Medium	Low	High	High
Qemy	YOUNGER EMERGENT MARINE DEPOSITS - Predominantly clay and silt with minor sand interfingering with coarser deltaic deposits and alluvium in the upper parts. Elevated more recently than Qem deposits, elevation due to isostatic uplift during regional deglaciation. Smooth to slightly irregular surface. High permeability, good drainage.	Silt	High	Low	Low	High	High
COLLUVIAL DEPOSITS							
Qc	COLLUVIUM - Mixed silt, sand, pebbles, cobbles, boulders, and organic material that have moved downslope under the influence of gravity. Angular clasts. Irregular surface. High to very high permeability, fair to excellent drainage.	Mixed gravel, sand, and silt	High	Medium	Medium	Medium	High
Qcf	COLLUVIUM-ALLUVIUM - Poorly sorted pebbles, clasts, and boulders with minor silt and sand deposited in gullies on steep slopes by streams and mass wasting. Subangular to very angular coarse material. Irregular surface. Very high permeability, good drainage.	Gravel and sand	Medium	Medium	Low	Medium	Medium
Qct	TALUS - Poorly sorted pebbles, clasts, boulders, and minor sand deposited at base of steep slopes by debris falls. Angular coarse clasts. Irregular surface. Very high permeability, excellent drainage.	Mixed gravel, sand, and silt	Medium	Medium	Low	Medium	Medium
OTHER UNITS							
Ql	LACUSTRINE DEPOSIT - Well-sorted lake deposits composed primarily of clay and silt. Smooth surface. Low permeability, good drainage.	Silt	High	High	High	Medium	High
Qgi	GLACIAL ICE - Ice and snow of modern glaciers. Smooth to irregular surface.	Ice	Low	Low	Low	Medium	Medium
Qnf	ARTIFICIAL FILL - Loose, heterogeneous mixture of sand, pebbles, clasts, and boulders deposited by man. Generally angular clasts. Irregular surface. Very high permeability, excellent drainage.	Mixed gravel, silt, and sand	High	High	High	Medium	High
MzPz	BEDROCK UNDIFFERENTIATED - Paleozoic and Mesozoic undifferentiated sedimentary, igneous, and metamorphic rock (Decker, 1984, oral commun.).	Rock	Low	Low	Low	Low	Low

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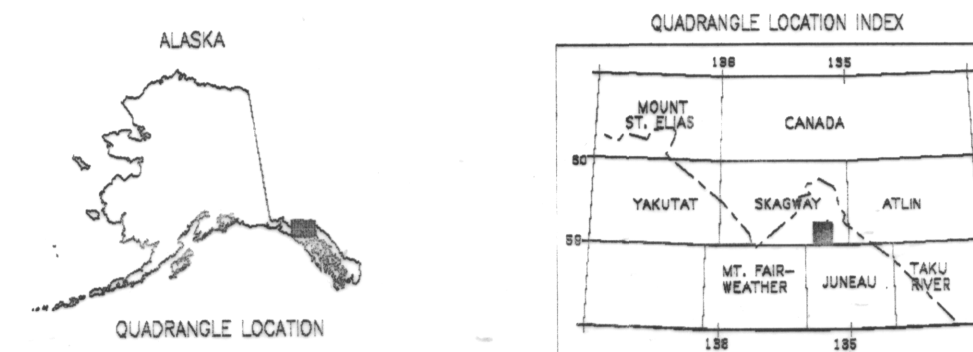
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